

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims:

1. (Currently amended) A process for the production of ethanol through fermentation of organic starting materials, the process comprising:

metabolizing pentose compounds of the organic starting materials using ~~at least one fungus belonging to the species Chalara a mix of at least two fungi, the mix comprising a fungus of the genus Chalara and a fungus of the genus Trametes~~, said fungus mix being capable of metabolizing pentose compounds to produce ethanol.

2. (Currently amended) The process according to claim 1, wherein said ~~at least one fungus mix of at least two fungi~~ is capable of metabolizing both pentose and hexose compounds.

3. (Canceled)

4. (Currently amended) The process according to claim 1, wherein said ~~at least one fungus is Chalara is the species Chalara parvispora~~.

5. (Currently amended) The process according to claim 3 1, wherein said ~~second fungus is Trametes is the species Trametes versicolor~~.

6. (Currently amended) The process according to claim 3 1, wherein said mix of fungi further comprises one or more fungi ~~chosen among from the group consisting of Trichoderma sp., Thielavia sp., Postia sp., Gloeophyllum sp., and Phanerochaete sp., or a combination thereof~~.

7. (Canceled)

8. (Currently amended) The process according to claim 1, wherein said ~~fungus or~~ mix of fungi is used in combination with at least one yeast.

9. (Currently amended) The process according to claim 1, wherein said ~~at least one fungus or~~ mix of fungi is added prior to, or substantially simultaneously with the addition of the yeast.

10. (Currently amended) The process according to claim 8, wherein said yeast is a yeast belonging to the species genus *Saccharomyces*.

11. (Original) The process according to claim 8, wherein said yeast is *Saccharomyces cerevisiae*.

12. (Previously presented) The process according to claim 1, wherein the fermentation is performed as batch fermentation.

13. (Previously presented) The process according to claim 1, wherein the fermentation is performed as a continuous or semi-continuous process, where starting materials and/or nutrients are added during fermentation.

14. (Previously presented) The process according to claim 1, wherein the pH of the starting material is adjusted to the range of about pH 4.5 – 7.

15. (Original) The process according to claim 14, wherein the pH is adjusted to the range of about 5.5 - 6.5.

16. (Original) The process according to claim 14, wherein the pH is adjusted to about pH 6.

17. (Previously presented) The process according to claim 1, wherein the fermentation is performed in a temperature interval of about 20 to about 40 °C.

18. (Original) The process according to claim 17, wherein the temperature is in the interval of about 26 to about 36 °C.

19. (Previously presented) The process according to claim 1, wherein the starting material is chosen among:

- wood or non-wood plant materials;
- waste or by-products from forestry, such as wood chips, saw dust etc;
- solid or liquid effluents or by-products from pulp and paper industry, such as wood hydrolysates;
- solid or liquid effluents or by-products from food and feed industry, for example, effluents or by-products containing cellulose, hemicellulose, sugar or starch;
- solid or liquid waste or by-products from agriculture;
- other waste or by-product streams or their components comprising compounds that can be fermented to produce ethanol; and
- any of the above-mentioned materials in treated or untreated form.

20. (Currently amended) A process for the production of ethanol from a starting material consisting substantially of waste or by-products from forestry, the process comprising:

metabolizing pentose compounds of the starting material consisting substantially of waste or by-products from forestry using ~~at least one fungus belonging to the species a mix of at least two fungi, the mix comprising a fungus of the genus Chalara and a fungus of the genus Trametes, said fungus mix~~ being capable of metabolizing pentose compounds.

21. (Currently amended) The process according to claim 20, wherein said ~~at least one fungus mix of at least two fungi~~ is capable of metabolizing both pentose and hexose compounds.

22. (Canceled)

23. (Currently amended) The process according to claim 20, wherein said ~~at least one fungus is Chalara is the species Chalara parvispora.~~

24. (Currently amended) The process according to claim ~~22~~ 20, wherein said ~~at least one second fungus is Trametes is the species Trametes versicolor.~~

25. (Currently amended) The process according to claim 22 20, wherein said mix of fungi further comprises one or more fungi chosen among *Trichoderma* sp., *Thielavia* sp., *Postia* sp., *Gloeophyllum* sp., *Phanerochaete* sp., or a combination thereof.

26. (Currently amended) The process according to claim 22 20, wherein said mix of fungi comprises the fungi *Chalara parvispora* and *Trametes versicolor*, and at least one of a fungus selected from the group consisting of *Trichoderma viride*, *Thielavia terrestris*, *Postia placenta*, *Gloeophyllum trabeum*, and *Phanerochaete chrysosporium*, or a combination thereof.

27. (Currently amended) The process according to claim 20, wherein said fungus mix of fungi is used in combination with at least one yeast.

28. (Previously presented) The process according to claim 20, wherein the starting material comprises spent liquor (waste liquor) from pulping.

29. (Currently amended) A starter culture for use in a process according to claim 1, comprising *Chalara parvispora* and at least one fungus chosen among *Trametes* sp., *Trichoderma* sp., *Thielavia* sp., *Postia* sp., *Gloeophyllum* sp., *Phanerochaete* sp., or a combination thereof the genus Chalara and the genus Trametes.

30. (Original) The starter culture according to claim 29, comprising *Chalara parvispora* and *Trametes versicolor*; and at least one of *Trichoderma viride*, *Thielavia terrestris*, *Postia placenta*, *Gloeophyllum trabeum*, *Phanerochaete chrysosporium*, or a combination thereof.

31. (Previously presented) The starter culture according to claim 29, further comprising a yeast.

32 and 33 (Canceled)

34. (New) The starter culture of claim 29, further comprising at least one fungus selected from the group consisting of *Trichoderma* sp., *Thielavia* sp., *Postia* sp., *Gloeophyllum* sp., and *Phanerochaete* sp.